Stepan

Stepan Chemical Company

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F. Wilm
1983 - Gen
cc SGM

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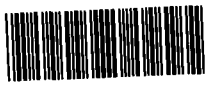

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ENVIRONMENTAL DISCLOSURE

JULY 23, 1980

In accordance with the requirements of Section 3.05 and 3.06 of the Agreement of Purchase and Sale between Olin and Stepan Chemical Company, the attached disclosure sets forth the pollution litigation and administrative proceedings, manufacturing processes and chemical waste disposal with regard to the Polychem (Wilmington) plant which occurred subsequent to Stepan's purchase of the plant late in 1968. In addition, this same type of information with regard to processes and waste disposal practices, which occurred prior to Stepan's ownership, are shown where they are known.

The Corporate and Plant Management personnel who have reviewed these matters and prepared the enclosure are:

Charles P. Riley, Jr.	-	Corporate Director of Manufacturing and Engineering
Ronald J. McBrien	-	Wilmington Plant Manager
Walter Beck	-	Group Leader, Corporate Research and formerly Polychem Technical Manager

WWM:gb

Exhibit 3.06

Environmental Disclosure*

1. Suits

Commonwealth of Massachusetts vs. Stepan Chemical Co., Inc. Suffolk Superior Court (served April 22, 1980) cites violation of the Massachusetts Hazardous Waste Management Act and violation of the Massachusetts Clean Waters Act in the storage and disposal of hazardous wastes.

In a joint meeting on April 30, 1980 at the Boston office of Sullivan and Worcester, representatives of Olin, Stepan, the Attoney General's office, and the Division of Water Pollution Control discussed the disposition of the above court action. It was agreed between the representative of the Attorney General and the representative of the Division of Water Pollution Control that if Olin Corporation purchased the Stepan, Wilmington plant site, the following would apply:

a.) Olin would have 12-18 months for an engineering study to define pollution problems and to suggest remedies.

b.) There would be no prosecution by the State during this period.

c.) Olin could expect to expand operations at the site.

The Attorney General and Stepan's counsel have jointly applied for a two month extension of the court action to accomodate Olin's decision on purchase of the property.

The seller has no knowledge of any other suit, threatened suit, actions, proceedings or claims under any applicable federal, state or local law or other environmental matters.

2. Manufacturing Processes Conducted on Wilmington Site, Sellers' Best Knowledge

a.) Opex - (Dinitrosopentamethylenetetramine)

Raw materials: Hexamethylenetetramine
Sodium ~~nitrate~~ nitrite
Hydrochloric acid
Processing oil - Ammonia

Product: Dinitrosopentamethylenetetramine (solid)

By-products in waste: Sodium chloride
Sodium ~~nitrite~~ nitrate
Formaldehyde
Processing oil - Ammonium Chloride

Process operated: 1953-1980

*All information prior to Stepan's purchase of plant in 1968 is based on knowledge of Ron McBrien and Charles P. Riley, Jr. Stepan has not made any investigation with regard to matters before it acquired the plant in 1968.

Exhibit 3.06
Environmental Disclosure

b.) Kempore - (Azodicarbonamide)

Raw materials: Hydrazine
Urea
Sulfuric acid
Sodium chlorate
Sodium Bromide ~~Bromine~~ (catalyst level)

Product: Azodicarbonamide (solid)

By-products in waste: Sodium sulfate
Sulfuric acid
Urea
Sodium chloride
Ammonium sulfate
Sodium Bromide

Up to 1967, sodium dichromate was used in the process instead of Sodium chlorate. The by-product waste contained chrome sulfate instead of sodium chloride and sodium sulfate.

Process operated: 1956-1980

c.) Hydrazine

Raw materials: Urea
Chlorine
Sodium hydroxide
Sulfuric acid

Product: Hydrazine and Semicarbazide solution

By-products in waste: Sodium sulfate
Sodium chloride
Ammonium Sulfate

Note: This process was shut down in the fall of 1970 with hydrazine then purchased from Olin Corporation. (operated 1963-1970)

d.) Kempore Dispersions

Raw materials: Azodicarbonamide
Dioctyl phthalate

Product: 50 percent dispersion of Azodicarbonamide in Dioctyl Phthalate

By-products in waste: None

Process operated: 1960-1980

e.) Wytox 312 - (trisnonylphenyl phosphite)

Raw materials: Nonyl phenol
Phorphorus trichloride

Product: Trisnonylphenyl phosphite (liquid)

By-products in waste: None (hydrogen chloride scrubbed in water)

Process operated: 1965-1980

Exhibit 3.06
Environmental Disclosure

f.) Actafoam R-3

Raw materials: 2-ethylhexoic acid
Zinc oxide
Dioctyl phthalate
~~Sodium oleate~~ Potassium oleate

Product: Liquid Azodicarbonamide activator

By-products in waste: None

Process operated: 1963-1980

g.) Wytox Pap - (Alkylated phenol)

Raw materials: Nonyl phenol
Dinonyl phenol
Formaldehyde

Product: Liquid Alkylated phenol

By-products in waste: None

Process operated: 1971-1980

h.) Nitropore 5PT - (5-phenyltetrazole)

Raw materials: Benzonitrile
Sodium azide
Sodium nitrite
Ammonium chloride
Hydrochloric acid
Dimethyl Formamide

Product: 5-phenyltetrazole (solid)

By-products in waste: Sodium chloride
Sodium nitrate
Dimethyl Formamide
Benzonitrile

(produced 1973-1980, limited quantities 24,000 lbs./yr.)

i.) Nitropore OT - (4,4' oxybisbenzenedisulfonylhydrazide)

Raw materials: Diphenyl oxide
Chlorosulfonic acid
Hydrazine
Ammonia

Product: 4,4' oxybisbenzenedisulfonylhydrazide

By-products in waste: Sulfuric acid
~~Hydrochloric acid~~ Ammonium Chloride

Process operated: 1969-1975 (Hydrochloric acid scrubbed in water and sold).

j.) Wytox ADP - (Dioctyl Diphenylamine)

Raw materials: Diphenylamine
Diisobutylene
~~Aluminum hydroxide~~
~~Sodium chloride~~
Aluminum chloride
Sodium hydroxide

Exhibit 3.06
Environmental Disclosure

Product: Dioctyldiphenylamine

By-products in waste: Aluminum hydroxide
~~Sodium chloride~~ Sodium hydroxide

Process terminated in 1971. (Operated 1962-1971)

k.) Phenolic and Urea Formaldehyde Resins

Raw Materials: Phenol
Urea
Formaldehyde

Products: Solid and liquid resins

By-products in waste: Phenol
Formaldehyde] ?

Process operated 1961-1967

l.) Phthalate Plasticizers - (dioctyl phthalate, dibutyl phthalate)

Raw materials: Phthalic anhydride
2-ethylhexanol
Butyl alcohol

Products: Liquid plasticizers

By-products in waste: None

Process operated: 1955-1961

m.) Wiltrol N - (N-Nitrosodiphenylamine)

Raw materials: Diphenylamine
Sodium nitrite
Sulfuric acid

Product: N-Nitrosodiphenylamine (solid)

By-products in waste: Sodium nitrite
Sodium sulfate

Process operated: 1965-1967

n.) *

3. Chemical Waste Disposal

To the seller's best knowledge, chemical manufacturing commenced on the Wilmington plant site around 1953. No waste treatment facility or sewer was included in the original plant facilities. The main plant effluents were discharged to a small man-made pond on the west side of the property which flowed to a brook bisecting the property. The brook exited the property at the east side along the railroad right of way.

Strong acid wastes were conducted separately to unlined man-made lagoons on the south side of the operating plant buildings.

* Small quantities of miscellaneous materials were manufactured at various times which had no by-product wastes.

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In 1969, Stepan Chemical Company, Inc. and the Division of Water Pollution Control of the Commonwealth of Massachusetts entered into a consent order whereby Stepan was to build a waste treatment plant and the effluents from the treatment plant would be discharged to a Metropolitan District Commission sewer which was to be extended to the immediate area of the plant. Stepan was allowed to continue to discharge chemical wastes in the same manner until the treatment plant was completed. In 1970, with the completion of the treatment plant construction, Stepan was requested to operate the plant and discharge the treated wastes through its property until the sewer construction was complete. The sewer was finished in 1972 and approval was granted to Stepan to discharge the effluents from the treatment plant into the sewer by the Metropolitan District Commission.

The Stepan treatment facility neutralizes sulfuric acid and sulfate wastes with a lime system. The resulting calcium sulfate by-product is separated from the effluent by settling in vinyl lined lagoons. The Department of Public Health of the Commonwealth of Massachusetts approved the construction of a landfill on the Stepan property for the disposal of the calcium sulfate by-products.

The seller has no knowledge of chemical or other dumping on the plant site during its ownership by its own personnel or third parties except as described previously with the discharge of operating wastes. The seller has no knowledge of chemical or other dumping on the property in prior periods.

CPR, Jr./lmg